

## REMARKS

The Office Action dated June 20, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 6, 10, 13, 17, 22 and 26 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claim 9 has been canceled without prejudice or disclaimer. No new matter has been added and no new issues are raised which require further consideration or search. Claims 1, 6-13 and 17-29 are presently pending.

Claims 1, 6-13 and 17-29 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bridgelall (U.S. Patent No. 6,717,516) in view of Gunzelmann (WO 02/091601). The Office Action took the position that Bridgelall discloses all of the elements of the claims, with the exception of the RF module and the baseband modem being physically separate modules connected by a digital interface. The Office Action then cited Gunzelmann as allegedly curing this deficiency in Bridgelall. This rejection is respectfully traversed for at least the following reasons.

Claim 1 recites a system that includes a modem configured to perform modulating and demodulating. The system also includes a digital interface configured to interface. The system further includes a radio configured to perform radio frequency

communication including a radio frequency controller and a radio frequency parts. The modem and the radio respectively form physically separate modules that are connected with each other by the digital interface, and wherein modem performs forward error correction coding and symbol mapping and demapping.

Claim 6, upon which claims 7, 8 and 10-12 are dependent recites a method that includes forward error correction coding and decoding and symbol mapping and demapping. The method further includes implementing the forward error correction coding and decoding and symbol mapping and demapping in a baseband modem which is separate from a radio. The radio comprising a digitally operating radio frequency controller and radio frequency parts, and wherein a digital interface connects the baseband modem and the radio with each other within the radio.

Claim 13 recites an apparatus that includes digital means for interfacing. The apparatus further includes radio means comprising radio controlling means and radio parts means. The apparatus further includes baseband means for modulating and demodulating with the radio means so as to enable a physical separation of the baseband means and the radio means. The digital means performs the signal exchange between the radio means and the baseband means, and wherein baseband means performs forward error correction coding and symbol mapping and demapping.

Claim 17, upon which claims 18-21 are dependent, recites a system that includes a baseband modem. The system also includes a digital interface, and a radio comprising a digitally operating radio frequency controller and radio frequency parts. The baseband modem and the radio are respectively configured as physically separate modules that may be connected with each other by the digital interface, and wherein the baseband modem performs forward error correction coding and symbol mapping and demapping..

Claim 22, upon which claims 23-25 are dependent, recites an apparatus that includes a connector configured to connect a baseband modem with a radio. The radio comprising a digitally operating radio frequency controller and radio frequency parts within the radio. The apparatus also includes a physical separation of the baseband modem and the radio via the interface. The apparatus also includes an exchanger configured to perform the signal exchange between the modules, and wherein the baseband modem performs forward error correction coding and symbol mapping and demapping.

Claim 26, upon which claims 27-29 are dependent, recites an apparatus that includes a radio comprising a digitally operating radio frequency controller and radio frequency parts. The radio is configured to be connected to a baseband modem. The radio is physically separate from said baseband modem, by a digital interface. The

baseband modem performs forward error correction coding and symbol mapping and demapping.

As will be discussed below, the combination of Bridgelall and Gunzelmann fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above. The rejection is respectfully traversed for at least the following reasons.

The Office Action alleged that Bridgelall discloses a modem performing “forward error correction coding and symbol mapping and demapping”, as recited, in part, in independent claims 1, 6, 13, 17, 22 and 26. The Office Action relied on columns 5 and 7 of Bridgelall as allegedly teaching the above-noted feature of the claims. Applicants disagree with the Office Action’s interpretation of Bridgelall and submit that the “modem” and its respective components (46, 48, 49 and 51) do not teach a modem that performs forward error correction coding and symbol mapping and demapping, as recited in the claims.

Instead, as described in column 5 of Bridgelall, an RF device 12 is disclosed as having an RF module 34 and an antenna 36 for transmitting and receiving signals. A radio interface 42 couples the transmitter/receiver to a baseband modem 46 (see FIG. 2 and column 5, lines 1-5 of Bridgelall). RF baseband modems 46 and 48 are connected to a bit stream processor 50 (see column 5, lines 8-12 of Bridgelall). FIG. 4 illustrates the

baseband modem 48 and the bit stream processor 50 as separate components having separate components (note the dotted line in FIG. 4). Therefore, as can be clearly seen from FIG. 4, the bit stream processor 50 is not part of the modem 48.

Bit stream processor 50 is described in further detail in column 7 of Bridgelall. Referring to column 7 of Bridgelall, the bit stream processor 50 is discussed as being separate and having a connection to the modem (see FIG. 5 and column 7, lines 7-10 of Bridgelall). Referring to FIG. 6, the bit stream processor 50 is illustrated in greater detail. The bit stream processor 50 includes a number of sub-components one of which is referred to as a “logic 186.” Bridgelall discloses that the logic 186 generates forward error correction (FEC) on data to be transmitted. The data is formatted into a packet format and state machine 180 controls the logic units to provide the entire transmit packet to OR gate 195. The packet is then routed to the transmit circuit of either the RFID modem 48 or the Bluetooth modem 46 via a multiplexer 196, which represents an exit point of the bit stream processor 50 (see column 7, lines 30-38 and FIG. 6 of Bridgelall).

As is clearly demonstrated from the disclosure of Bridgelall, the modem 46 and 48 are not part of the bit stream processor and do not perform “forward error correction coding and symbol mapping and demapping”, as recited, in part, in independent claims 1, 6, 13, 17, 22 and 26. Furthermore, Gunzelmann fails to cure the deficiencies of Bridgelall with respect to the claims.

Gunzelmann discloses a transmission configuration with a baseband module and a radio-frequency module for mobile radio transmission purposes. A digital interface connects the baseband module and the radio-frequency module and provides separate transmission of payload data and configuration data (see Abstract). Gunzelmann does not disclose performing forward error correction coding and symbol mapping. Because Gunzelmann is deficient with respect to forward error correction and symbol mapping, then clearly Gunzelmann does not disclose or suggest a modem which performs “forward error correction coding and symbol mapping and demapping”, as recited, in part, in independent claims 1, 6, 13, 17, 22 and 26.

Therefore, Applicants submit that Bridgelall and Gunzelmann fails to teach all of the subject matter of independent claims 1, 6, 13, 17, 22 and 26. By virtue of dependency, Bridgelall also fails to teach the subject matter of those claims dependent thereon. Withdrawal of the rejection of claims 1, 6-13 and 17-29 is kindly requested.

For at least the reasons discussed above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1, 6-13 and 17-29 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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